



# Focus on Managing Water in the Entiat River Basin

## From Ecology's Water Resources Program

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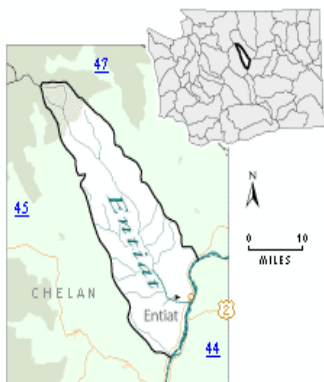
In 2005, the Department of Ecology (Ecology) set in rule a water management program for the Entiat Water Resources Inventory Area (WRIA 46) to implement local watershed planning. The recommendations in the Entiat River Basin Management Plan provided the basis for the Entiat River basin water resources management program, Chapter 173-546 of the Washington Administrative Code.

- Establishing instream flow levels that protect flows for fish rearing and spawning, and existing water rights.
- Establishing a reserve of water for future uses (including domestic, commercial agriculture and light industrial uses).
- Setting maximum allocation limits above instream flow levels.

The Entiat WRIA Planning Unit (Planning Unit), when created, brought together people representing a variety of local interests. The Planning Unit membership includes the Chelan County Conservation District; City of Entiat; Entiat Irrigation District; Chelan County; federal and state governments; the Yakama Nation; special interest groups (Audubon Society and NW Ecosystem Alliance); local business (Longview Fibre); partnership ditch companies (Knapp-Wham and Hanan-Detwiler companies) and the general public.

Together, members of the Planning Unit undertook the challenging task of developing a plan to guide current and future water management in the Entiat River watershed. The Entiat River Basin Water Management Plan was approved by the Planning Unit in May 2004 and by the Chelan County Board of County Commissioners in September 2004.

## Overview of the basin



The Entiat River is located along the eastern slopes of the Cascade Mountains in northern-central Washington. The Entiat WRIA management plan addresses the Entiat and Mad River watersheds as well as some minor Columbia River tributaries that lie to the north and south of the mouth of the Entiat River.

More than 90 percent of the river basin is within publicly-owned property, primarily within the Wenatchee National Forest. The Entiat River experiences very high stream flows in the late spring and early summer, and very low flows during late summer to early spring. Snowmelt is the predominant source of both surface and underground water (or ground water) in the Entiat, and generally there is a high degree of connectivity

between ground and surface water sources in the watershed. The watershed also includes several perennial (on-going) and intermittent (seasonal) streams that flow into the larger rivers.

The river supports a number of important fish species including Chinook salmon, steelhead and bull trout. The winter scarcity of juvenile-rearing habitat in the Lower Entiat River limits the watershed's ability to fully sustain these fish populations.



## **Entiat River basin water management plan**

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The Entiat River basin water management plan holds recommendations for managing water resources and related habitat within the watershed to meet both human and environmental needs. The management plan includes recommendations for: managing water resources, instream flow levels, restoring fish and wildlife habitat, planting shade trees and vegetation, and removing roads that can cause erosion and degrade water quality. The plan also recommends the state and Planning Unit explore creating a trust-water program for the watershed. Trust-water programs make it easier for water-right holders to lease, sell or donate their water rights to improve stream-flow conditions.

### **Water management rule recommendation**

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The water management program implements several recommendations of the Entiat water management plan:

#### *Instream flows*

Instream flows are set for the Entiat and Mad Rivers. Setting an “instream flow” creates a water right for a river or other surface water-body. It establishes a specific amount of water—or flow—in a stream at a specific location for a specific time. The instream flow typically varies with the season. The purpose of instream flows is to protect and preserve instream resources such as fish, wildlife, aesthetics and recreation.

Ecology worked with the Planning Unit to determine the instream flow levels. They used their best professional judgment, together with information on the biology and hydrology of the rivers. Instream flow levels reflect what would be beneficial for fish if the flows, set by state rule, were present in the streams and rivers in the watershed.

Instream flows do not affect existing or “senior” water rights. Therefore setting instream flows does not put water in streams. Setting instream flows does protect streams from new withdrawals that would harm instream resources. Setting instream flow levels also helps Ecology and the Planning Unit determine what water is available for new uses not eligible for use of the reserved water.

#### *Reserve of water for future uses*

The Planning Unit saw that, with instream flows set, new water uses would be limited wherever public water systems were unavailable. On recommendation of the Planning Unit, Ecology created a reserve of up to 5 cubic feet per second (cfs) or 3.23 million gallons of surface and ground water a day. Use of reserve water is not subject to the instream flows. (In other words, these uses may continue even when actual stream flows are less than the instream flow levels set in rule.) Future domestic, commercial irrigation, and light industrial uses in the Entiat watershed may access water from the reserve. Expectations are that the reserve will be able to meet all new water needs for the next 22 years.

There will be a continuing need for reliable sources of water for new uses. Ecology will work with counties and utilities to help acquire the resources and expertise to develop other reliable sources of water for the future, including:

- Water-storage facilities
- Conservation and efficiency measures applied to existing uses and transfer of saved water
- Water acquisition or leasing
- Trust water-right programs

#### *Maximum future allocations*

Another key element of the rule is maximum allocations. Ecology and the Planning Unit have determined that at certain times of the year, there is some water above the instream flows available for new uses. However, to preserve the environmental benefits of natural annual high flows, the rule limits the amount allowed for allocation in specific streams at specific times. Maximum allocations were set for the mainstem Entiat from May 1 to July 15 and for the Mad River from April 16 through June 30.

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